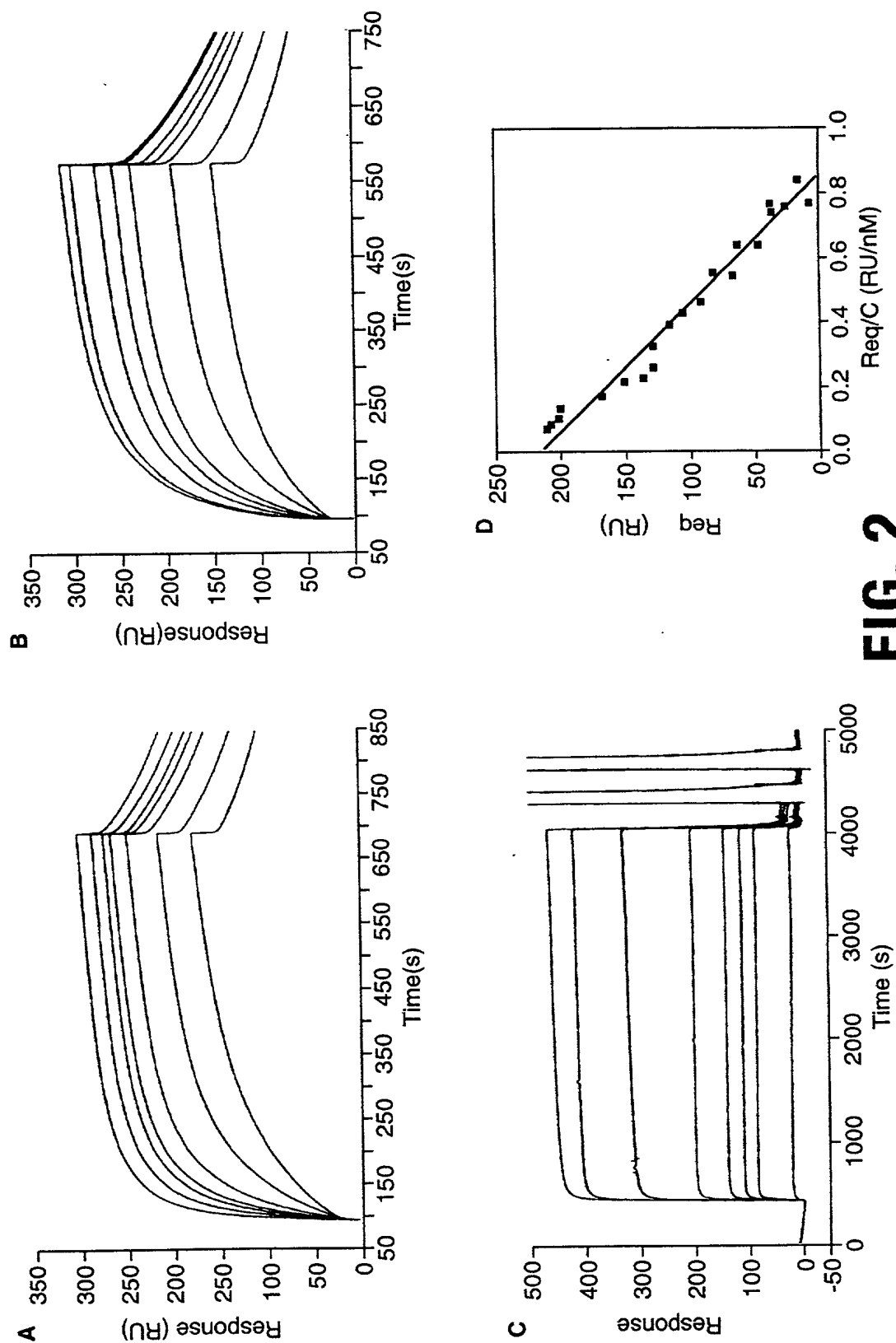


[illegible][illegible]

FIG. 1

**FIG. 2**

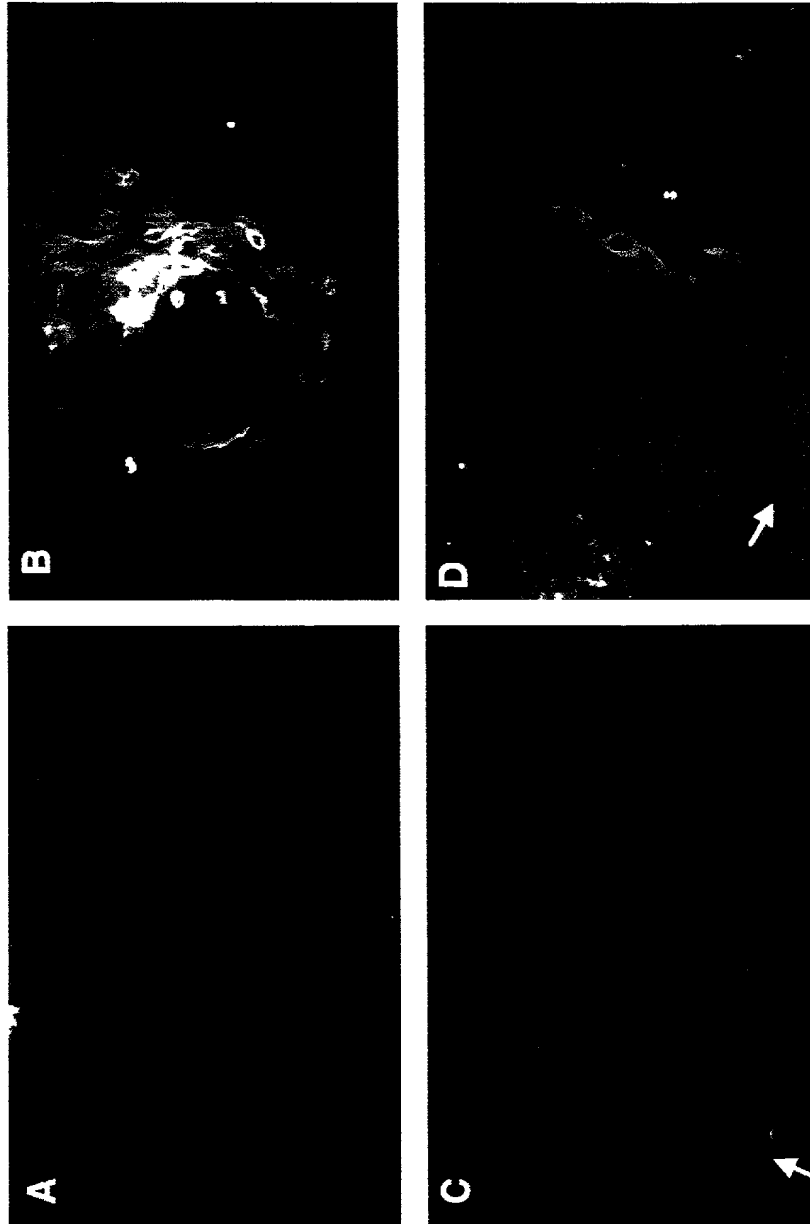


FIG. 3

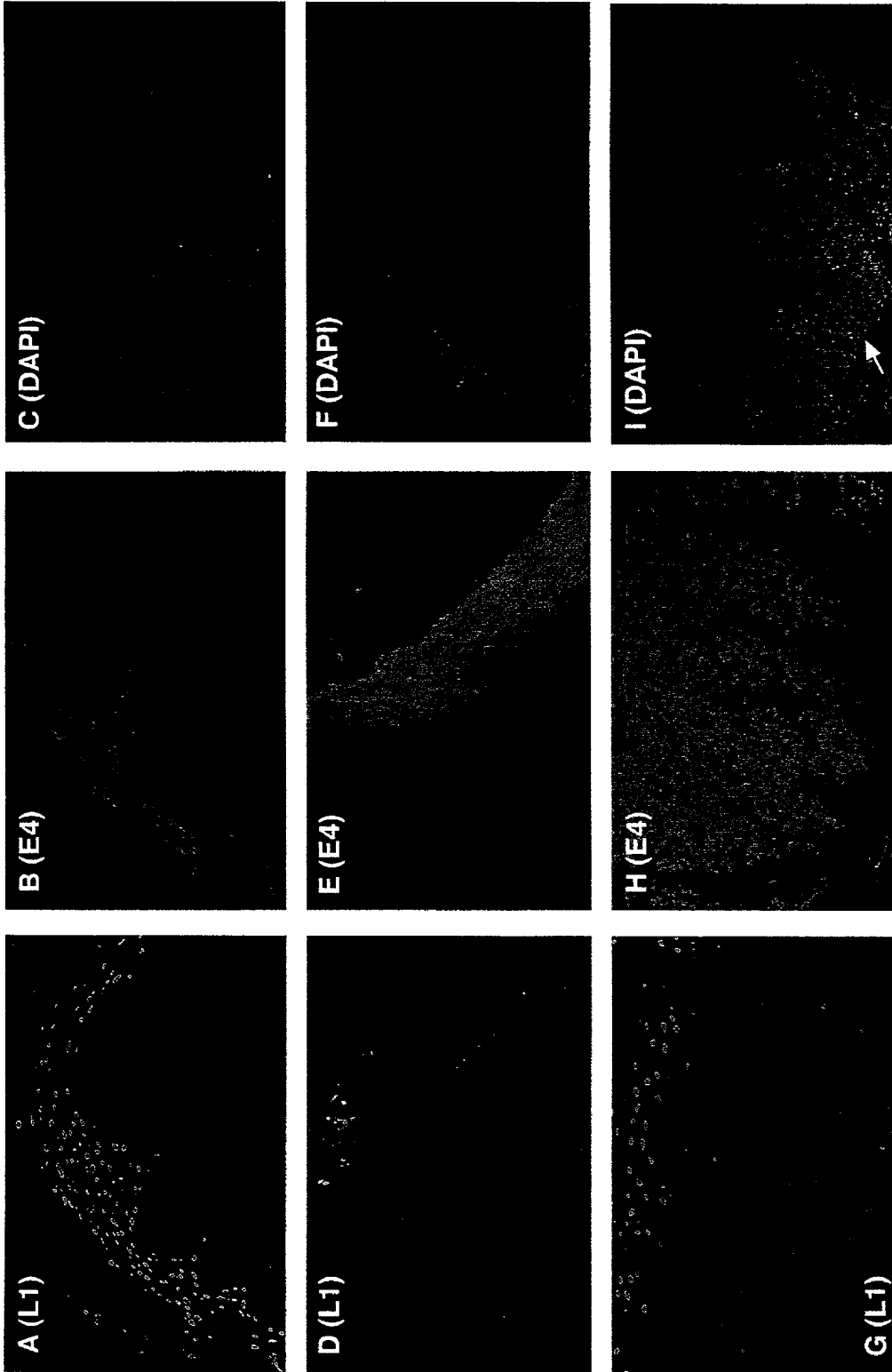


FIG. 4

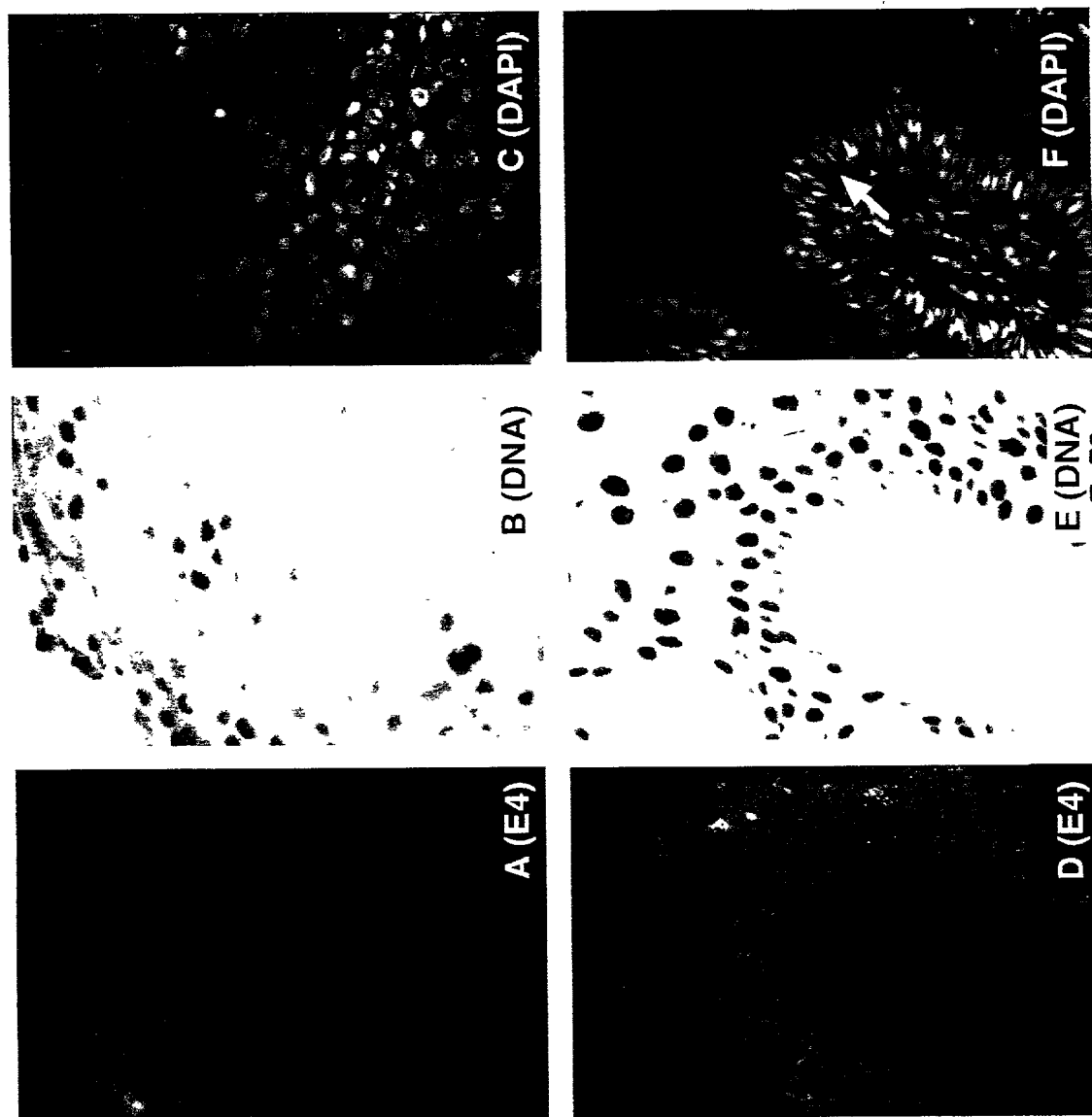


FIG. 5

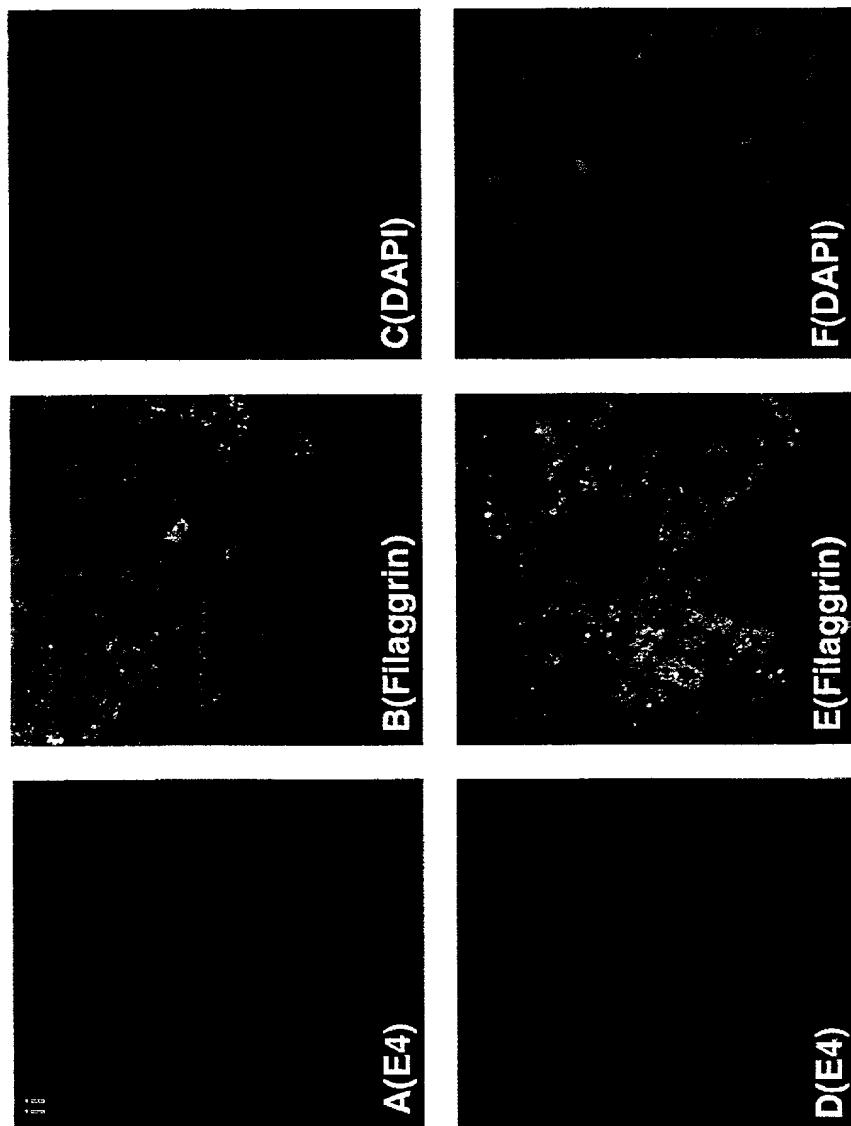


FIG. 6(i)

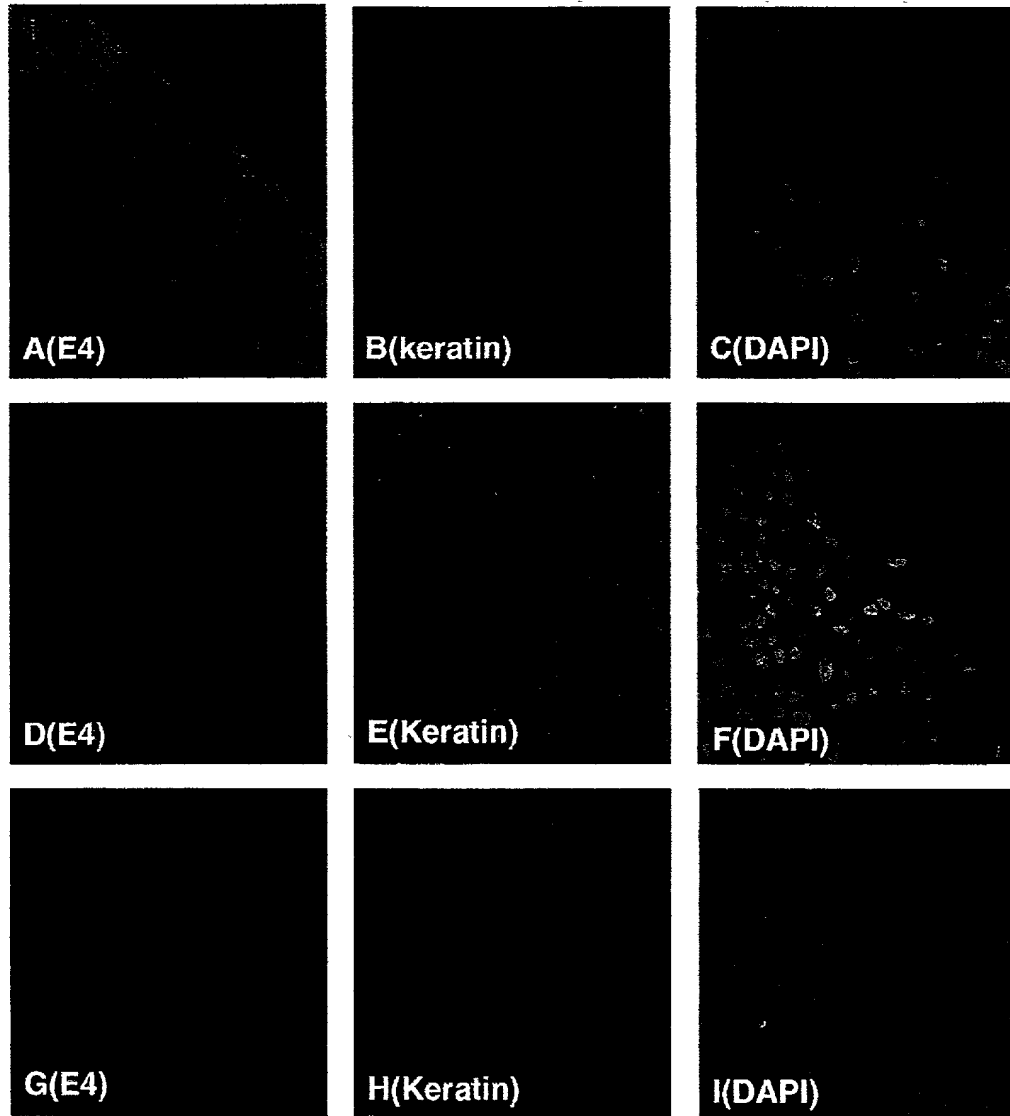


FIG. 6(ii)

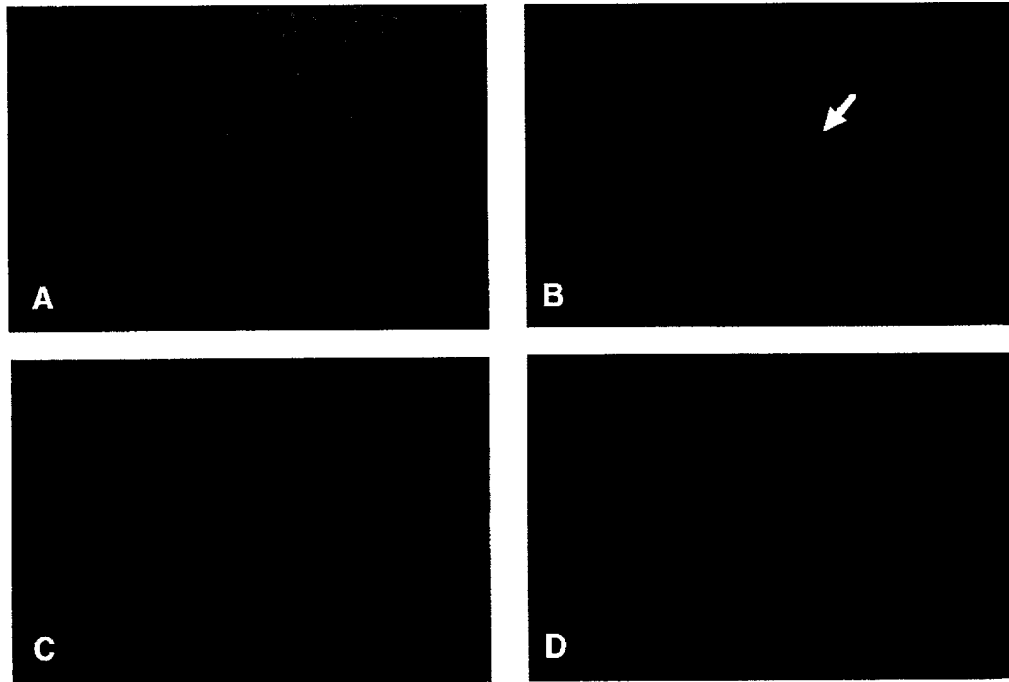


FIG. 7

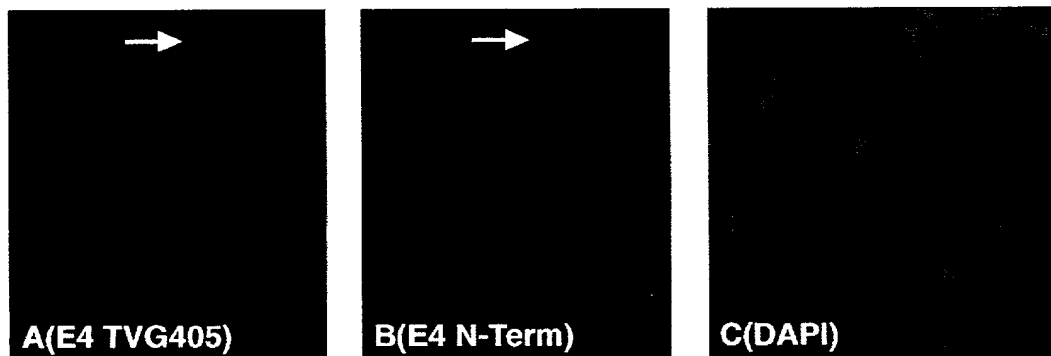


FIG. 8

CHARGED REGION....

most-likely	.....	PPPPP.RP..WAGPKKP.....TRGPPRRRRL....E..SDS.....	51
HPV54	.....	HH...V...TT..-Q-Q...SRA.....-...NEL.....	43
HPV32	.....	-SQGV.TA..TOTAQTEY...Y-KT--PP-R.....-N-T.....	61
HPV42	.....	-L..T.TT..TQTVOTEQ...HT-C.-SKPH-H.....-N-T.....	59
HPV3	.....	K-RWA.--KDRS-SD...SDS.....-ST...GS.-S.....	46
HPV28	.....	K-RWA.--KDRS-ND...SDS.....-HST...G.-S.....	46
HPV10	.....	K-RWA.--RDRN-SD...SDS.....-ST...D.-T.....	46
HPV29	.....	K-RWG.LR..RDRNGNDA..GLKQSGLGHS...S.-S.....	52
HPV61	.....	-----A.-P-RH-...PRC.....-I.....	49
HPV2a	.....	QEEQLR--KR..C-P-RRQ...RV.....-PS...A.-V.....	61
HPV27	.....	QEEQLR-Q.TC..C-P-RRH...RV.....-PS...A.-G.....	58
HPV57	.....	QS.....-HSRTPPRR...HRV.....-HPS...A.-G.....	53
HPV26	.....	-T...C...-R--...-HTQ.....-D.....	45
HPV51	.....	L...PA...-...-HNS.....-N-X.....	42
HPV30	.....	-----T--...RP...PHGR.....-NVL.....	46
HPV53	.....	-----T--H...HPC...G-E...N.VPE.....	44
HPV56	.....	-----T-T...QY...PT...D.QEN.....	42
HPV66	.....	-----L...-T...RY...PT...D.QEN.....	42
HPV18	.....	A...C...-QR...-A.....-L.H-L.....	44
HPV45	.....	K...H...-QM...-S.....-L.....	44
HPV39	.....	-Q...Q...H...-Q...S.....-L.....	43
HPV70	.....	-Q...Q...H...-L...S.....-A.-VE.....	43
HPV59	.....	K...T...-RG...-V.....-Q.....	44
HPV7	.....	-T--C..TT..PT...C...-PPK...Y.TTT.....	45
HPV40	.....	-T-T.P...PQR-P-R...S.A-P-H-P...-E.....	48
HPV16	.....	K...S...-H...-S.....-Q.....	41
HPV35h	.....	K...A...-Q--...-QIT...N.DFE.....	43
HPV31	.....	K...A...-V-V...C.GG...-L...-Q.....	46
HPV52	.....	-Q...C...-V--TH...TYN...HH...N.D-D.....	40
HPV33	.....	.....HH-Q...-PN...D.D-L.....	30
HPV58	.....	.....TTK...V...H-G...Q.-D.....	29
RhPV1	.....	-T...P...-R-T...C...GH...Q.-EC.....	43
HVP6b	.....	-L...C...Q...-R-T...OC...K...G.NEH.....	40
HPV11	.....	LQ...C...P...-R-T...AC...-G.-EH.....	41
HVP44	.....	HR-H-HC...L-P-RTA...W--HV...N.DPE.....	48
HVP55	.....	HR-HLHC...P-P-RNA...W--HV...N.DPE.....	48
HVP13	.....	-Q...C...A...-R-N...VC...K...V.N-N.....	43
PCPV1	.....	AQ...CH..PS.-Q-I...VC...K--PI...N.DFE.....	44
HPV34	.....	.....-THRTR...VC...QHGN...G.I--.....	35
HPV19	.....	GTRDDLPAAGPDDK...K.-A..RN.DQG-N...PSP-RG-G-G...F.RLTGDHDPN	93
HPV25	.....	PPAGHDDSKPKRARGDQG-S-G...GP.SPA-V...SD--RG-G-G...NL.-RLSGDQDP	105
HPV20	.....	.....GTDGDLVPGQGEQ-K.-A..RGDGGQS...PSPS-G-G-GR...G.TGLGLGLGL	91
HPV21	.....	.....GTDGDRPVGPGER-K.-I..KG-DRG...SP-RG-G-GR...G.-PDPGPDP	90
HPV14d	.....	.....EGTDADRPVGPGER-K.-G..RG-DRG...SP-RG-G-G...G.-LDPGRNR	92
HPV5	.....	SQGDKRKSGDQGPDTGPGGLGPGRG-S-K.-T...LGP-PG-G...PR-S-RLGPLQ...A.DRDPEE...	115
HPV36	.....	.QGDRKRSKGDQGPDTDPLGPDRG-S-G..T-Q.PL-LPP...GL--R-SP--...G.-SGYQPD..	114
HPV47	.....	QGDRTKCDPDPDPCRGVPLKPTL-----P...PT--GLRRSTRLLVLV-GQGPPP...D.LPA.....	116
HPV12	.....	.GDRKRSKGDQGRDTAPSLTPGRA-S-K.-G...L-P-PY...GPP--R-SH--...G.TGGRD...	107
HPV8	.....	...QDRKRSKGDQGRDTAPGLAPGRS-GL-G...L-P-PY...GP--R-SP-Q...F.GPGPDRDPE	111
HPV24	.....	...PLTPDADDDPRPGKRSKGDHEG-A-G.-A..A-PL-LDL.DPPQ-G-DQPPG...A.TGG.....	102
HPV15	.....	...TTEKNLALQP---GG.-KD.KDKD-TQ..QGDK---QGDK...K.-PG.....	86
HPV17	.....	...DTGGKRLALQ--P..CTKD-TS...DDQ---HGGDK...Q.-PG.....	79
HPV37	.....	.....EEKHLALQ---GK..KDKE-T-Q..QGDK---PGGNK...Q.PPG.....	82
HPV9	.....	...PPPGKRDREKEKEKEKEKEK.K.-TT-D-G...DP.RVEQPKP...G.EG.....	93
HPV22	.....	...LVLQSP-SGGKGE..RDKD---Q...QGEEK-DQGP...-AP.....	74
HPV23	.....	...KHLALQ---G.GK..KDKE---S...PGEEK-DQGP...G.AE.....	71
HPV38	.....	...DTGEXHLALQ---AG..KGKD-EK...PQA-KGEEK...A.DQG.....	71
HPV49	.....	.TLVLQPPPTPGKRSRDDDPGLEPG-ADGK.-A..PQ-----AVPD-DPDPPLP...-DPEGP...	120
HPV4	.....	...SRRA.LL..EG-NRCN...P--P-PLKPREYD..Y-E.....	57
HPV65	.....	...SL-R.-ALVVG-NRCNL..NRPPQR-PKP-GY...-Y-E.....	57
HPV48	.....	...LE.GD.-A..SQKTPT...S.-P-HP...D.YE.....	49
HPV50	.....	...ANRKD.LE..AV.NQ--Y...R-PNH-P-HQ...Q.Y-F.....	50
HPV60	.....	...L...T..EDR-H-R...ESLAL---V...FDYDAE.....	55
BPV1	.....	...SLSL.LC..S.-PPA...V...PS...-QA.....	45
BPV2	.....	...SLSL.LC..S.-PPA...Y...PS...-QA.....	44
EEPV	.....	...TQ-T.E...CLTLLD...N...PPF...V.AP.....	44
DPV	.....	...TL...LL..E-T-FTV...PS...E...A.KTG.....	46
BPV4	.....	...DL-E.T...G--SRGR...S-LRD-DHGH...DH.DRL.....	50
HPV41	.....	...QRYV.DR..RGRDDAET..RKRGSRSPQPLS...-DEE.....	38
COPV	.....	...L-GK.GR..HG-LDGG...-RGSPEGQ...-DEE.....	48
CRPV	.....	...QG-K.-VH...DEGQ...G...HQC...C.NEG.....	51
ROPV	.....	...LOY-Q.A...RT.IR...RSSRY-G-F...V.T-GGDPDPQ	55
HPV1a	.....	...T-SN.-R..PSTTPNS...QD--R--SDK...D.-RK.....	50
HPV63	.....	...KL-EKO-R..RGRDTTR...N...-LF...A.-G.....	46
MnPV	.....	...I--V..SLQD-TT...GGNQOR---G...-RGA.....	59

FIG. 9

.... CHARGED REGION

most-likely	.....DSDSGEVEG.....PTPTTPPAPTG.....	72
HPV54	.....E-TA.QTSN.....H-APQT.....	57
HPV32	.....--LC.SHQQ.....S-CS-T--SQ-Y.....	80
HPV42	.....--VDSRHHS.....TCS-QT--S-ASP.....	81
HPV3	.....N-S-NSNSN.....NI-KP--RK-LN.....	67
HPV28	.....S--.....--KP--RK-LN.....	60
HPV10	.....S--K.....G-KI--RR-RN.....	61
HPV29	.....S.T-SSSSNR.....R--P--RK-VH.....	73
HPV61	.....--TET-SS.....S--QHKKTT-S.....	68
HPV2a	.....S---SI.....G--LRERSE-.....	79
HPV27	.....S---SI.....SG--LRERSE-.....	76
HPV57	.....S---S.....NS--LRGRSEK-.....	71
HPV26	.....--VDLTPP.....S-QS-LS-QLPH.....	65
HPV30	.....EPQ-PT-O.....PDS-L-ESPT.....	66
HPV53	.....P.O-PT-L.....TP-HS-LPO-ES.....	63
HPV56	.....-P-Y.GNON.....L--PES-TOSVS.....	62
HPV66	.....-PEQVNON.....L--PES-THTVS.....	62
HPV18	.....-TVD.....SRRSS.....	53
HPV45	.....--VD.....SOSST...-D.....	55
HPV39	.....--VQ.....SQS-LS--E.....	56
HPV70	.....S.PD.....PQKQT.....	51
HPV59	.....--VD.THS.....-LSL-.....	56
HPV7	.....ATHRP-S--.....E-E-C-SVQW-DV.....	67
HPV40	.....E.TD.....-CPS-LLWANHS.....	63
HPV16	.....-Q-QTP-.....-A--LSCC-E.....	59
HPV35h	.....GVP-.....S----SECDS.....	58
HPV31	.....E.Q-QST-.....----TSCCEA.....	64
HPV52	.....Q.T-QTP-.....--S--TTFCGD.....	58
HPV33	.....QTPQ.....--PS-LQSCSV.....	45
HPV58	.....-IYQTP-.....T--S--QSIQ-A.....	49
RhPV1	.....V.GQTQ--.....IQCG-.....	55
HVP6b	.....E.E-...N.....SPLA--CVW--L.....	56
HPV11	.....V-R.....PL--CVW--S.....	55
HVP44	.....-PPQ-.....--ET-SVS.....	63
HVP55	.....-PPQ-.....--GT-SVS.....	63
HVP13	.....EDLHVPL-.....--R-HK-LCVS.....	62
PCPV1	.....-PPTVL-.....NSK--LTLCVP.....	62
HPV34	.....V.TQ.....-RG.....	41
HPV19	.....PEERPPPLE-----HP-PPVTN--GH.....	119
HPV25	DPEEKP.....OPPEGEVOGHPOPPVTP-PQ.....HL-PP-LP--N-HNDRD.....	149
HPV20	NRRAGGLGTDHD.....PDPEGESPSAPLPPPPQPPPD-Q--.....HP-PP--P-HN-RD..S.....	144
HPV21	GPIPGPGLNRLTSRNTSDPEGKCPSSLP PPPPPPPQPTTPE-OG--.....HP-PP--P-NGHDG... ..	152
HPV14d	LSGGLGTD.....QDPDPDKKKCPESOPPE-----HP-PP-NGHNGH.....	135
HPV5	.....GPOPPAE-----HPGG.DQGHP-PP-----HN-H.....	147
HPV36	.....HDPEAPLE-----GGH...GHHP-PP--P--N.....	144
HPV47	.....PPVE-----HPQKDRDHP-P--ONGHGK.....	145
HPV12	.....RNPEE-G---HP--P-LSGGDP.....	129
HPV8	DGLQP.....PLGEGQVEGHPG-GDQPQ.....HP-P--SNGHK-.....	147
HPV24	.....V.GETPP.....GNEESQP--GE.....	120
HPV15	.....EGT-ADGD.....D-EK--S--P-E.....	106
HPV17	.....EGSDASGDEN.....A---E--QD---E.....	103
HPV37	.....EGTDADGDEN.....A---E--V---E.....	106
HPV9	.....-G-E-...-P-Q--LP---E.....	112
HPV22	.....SGEG-PPDD.....-S-EN-QN--G.....	95
HPV23	.....NGGG-KPKD.....-P-EE-QN--G.....	92
HPV38	.....P.EAPTG--GTP...GD-P-ED-QS--P-EG..E.....	99
HPV49	.....E-.L-QPP-I.....-A-RE--GAE.....	140
HPV4	.....-EK-NQ.....-GQEK---KEEE.....	77
HPV65	.....-DK-NQ.....-GQER---KEEE.....	77
HPV48	.....-DENR-N.....LE-P--.H-ED.....	67
HPV50	.....-EDD-K-N.....TI--DTESHNON.....	70
HPV60	.....-PT-.NK-N.....YP-ESR-V-KDA.....	75
BPV1	.....V.GY-T-LA.....R---IF.LQAR.....	64
BPV2	.....V.GY-T-LA.....R---IF.LQAR.....	63
EEPv	.....E.LAKTGV-P.....F-ARL-T-HHHP.....	65
DPV	.....VGPL.....-ARL-T-HHSP.....	61
BPV4	.....RRGRTP-DE.....TRGYRV-GD-RE.....	71
HPV41	.....LT-A...D.....P-RR-N-G-RRRL..F.....	57
COPV	.....--EE-A-N.....YP-SRS-R-RR-R.....	69
CRPV	.....R.Q-...N-N.....RP-R-K.....	63
ROPV	E.....LDSTQQ-PEDK-NIP.....--S-PT-S--P.....	83
HVP1a	.....H.LYADGL.....TDGED-EV-EVE.....	69
NPV63	.....PT-E-...-G-EV-EI--SD.....	62
MnPV	.....RTP-P-TTA.....QR-KR-RRAC-RK.....	81

FIG. 9CONT'D